

Applicant : Richard A. Dermer
Serial No. : 09/846,923
Filed : April 30, 2001
Page : 2 of 9

Attorney's Docket No.: 07844-444001 / P408

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A method of organizing components to perform a task used by a component based application, comprising:
 - selecting a role name symbolizing the task that the component-based application requests;
 - grouping components together to perform the task wherein each component includes an interface for communicating information with other components; and
 - defining an assembly data-structure having the role name and metadata information identifying each component in the group of components and the connections used to connect the interface in each component with the other components used in performing the requested task.
2. (Original) The method of claim 1 wherein an assembly name identifies the assembly data-structure and is associated with the role name.
3. (Original) The method of claim 1 wherein the component-based application requests the task when the component-based application is executed.
4. (Original) The method of claim 1 wherein the assembly data-structure is represented using Extensible Markup Language (XML).
5. (Original) The method of claim 1 wherein the interface is implemented using a static link between components and capable of passing data to the other components.

Applicant : Richard A. Dermer
Serial No. : 09/846,923
Filed : April 30, 2001
Page : 3 of 9

Attorney's Docket No.: 07844-444001 / P408

6. (Original) The method of claim 1 wherein the interface is implemented using an object-model that uses the interface to pass objects with data to the other components.
7. (Original) The method of claim 3 wherein the object-model is selected from a set of object-models including Component Object Model (COM), Bravo Interface Binder (BIB), and Common Object Request Broker Architecture (CORBA).
8. (Original) The method of claim 1 wherein the metadata in the assembly data-structure indicates if a component processes data as either a client or a server to another component.
9. (Original) A method of processing a task for a component-based application, comprising:
 - receiving a request from the component-based application that specifies a role name symbolizing the task;
 - accessing an assembly data-structure corresponding to the role name and having metadata information specifying a number of components used to perform the task and interfaces used to connect each component with other components, wherein the interface facilitates communicating information between components;
 - loading a component identified in the assembly data-structure into an area for processing;
 - connecting an interface associated with the loaded component to other components according to the meta-data information in the assembly data-structure; and
 - performing the requested task using the loaded component to process data and the interface to pass information from the loaded component to other components.
10. (Original) The method of claim 9 wherein the metadata in the assembly data-structure indicates if a component processes data as either a client or a server to another component.
11. (Original) The method of claim 9 wherein the interface facilitates passing data between components using remote procedure calls.
12. (Original) The method of claim 9 wherein the interface is implemented using a static link between components and facilitates passing data to between the components.

Applicant : Richard A. Dermer
Serial No. : 09/846,923
Filed : April 30, 2001
Page : 4 of 9

Attorney's Docket No.: 07844-444001 / P408

13. (Original) The method of claim 9 wherein the interface is implemented using an object-model that uses the interface to pass objects with data to other components.
14. (Original) The method of claim 13 wherein the data is passed between components specified in different assembly data-structures.
15. (Original) The method of claim 13 wherein the data is passed between components specified in the same assembly data-structure.
16. (Original) The method of claim 13 wherein the object-model is selected from a set of object-models including Component Object Model (COM), Bravo Interface Binder (BIB), and Common Object Request Broker Architecture (CORBA).
17. (Original) The method of claim 9 wherein the assembly data-structure is represented using Extensible Markup Language (XML).
18. (Original) The method of claim 9 further comprising:
 - receiving an indication that the requested task has been completed;
 - disconnecting the interface from each component associated with the completed task; and
 - unloading each disconnected component and the corresponding assembly data-structure without requiring that the component-based application is unloaded.
19. (Original) A method of integrating components together to perform an existing task when one of the components is modified, comprising:
 - providing an assembly data-structure having metadata information specifying a number of components that work together to perform an existing task and a number of interfaces used to connect the components together and facilitate communication between the components;
 - modifying one of the components, wherein the modified component alters the processing of information and renders the modified component and information incompatible with the other components associated with the existing task;
 - creating a new component to filter information that passes through an interface connected

Applicant : Richard A. Dermer
Serial No. : 09/846,923
Filed : April 30, 2001
Page : 5 of 9

Attorney's Docket No.: 07844-444001 / P408

to the modified component; and

modifying the assembly data-structure to specify the new component and to indicate that the new component filter the information passing through the modified component, wherein the modified component and new component produce filtered information compatible with other components used by the existing task.

20. (Original) The method of claim 19 wherein a component-based application requests the task to be executed using a role name symbolizing the task.
21. (Original) The method of claim 19 wherein the modified existing assembly data-structure further includes information for connecting the new component as a client and a server to the interface between components.
22. (Original) The method of claim 19 wherein the interface descriptions specify an interface implemented using a static link between components and capable of passing data to the other assemblies and components.
23. (Original) The method of claim 19 wherein the interface descriptions specify an interface implemented using an object-model and capable of passing data to the other components.
24. (Original) The method of claim 23 wherein the object-model is selected from a set of object-models including Component Object Model (COM), Bravo Interface Binder (BIB), and Common Object Request Broker Architecture (CORBA).
25. (Original) The method of claim 19 wherein the assembly data-structure is represented using Extensible Markup Language (XML).
26. (Original) An apparatus for organizing components to perform a task used by a component based application, comprising:
 - a processor;
 - a memory capable of storing instructions when executed on the processor cause the

Applicant : Richard A. Dermer
Serial No. : 09/846,923
Filed : April 30, 2001
Page : 6 of 9

Attorney's Docket No.: 07844-444001 / P408

processor to,

select a role name symbolizing the task that the component-based application requests,
group components together to perform the task wherein each component includes an
interface for communicating information with other components; and

define an assembly data-structure having the role name and metadata information
identifying each component in the group of components and the connections used to connect
the interface in each component with the other components used in performing the requested
task.

27. (Original) An apparatus for processing a task used by a component-based application,
comprising:

a processor;

a memory capable of storing instructions when executed on the processor that cause the
processor to,

receive a request from the component-based application that specifies a role name
symbolizing the task;

access an assembly data-structure corresponding to the role name and having metadata
information specifying a number of components used to perform the task and interfaces used
to connect each component with other components, wherein the interface facilitates
communicating information between components;

load a component identified in the assembly data-structure into an area for processing;

connect an interface associated with the loaded component to other components
according to the meta-data information in the assembly data-structure; and

perform the requested task using the loaded component to process data and the interface
to pass information from the loaded component to other components.

28. (Original) An apparatus for integrating components together to perform an existing task
when one of the components is modified, comprising:

a processor;

Applicant : Richard A. Dermer
Serial No. : 09/846,923
Filed : April 30, 2001
Page : 7 of 9

Attorney's Docket No.: 07844-444001 / P408

a memory capable of storing instructions when executed on the processor that cause the processor to,

provide an assembly data-structure having metadata information specifying a number of components that work together to perform an existing task and a number of interfaces used to connect the components together and facilitate communication between the components;

modify one of the components, wherein the modified component alters the processing of information and renders the modified component and information incompatible with the other components associated with the existing task;

create a new component to filter information that passes through an interface connected to the modified component; and

modify the assembly data-structure to specify the new component and to indicate that the new component filter the information passing through the modified component, wherein the modified component and new component produce filtered information compatible with other components used by the existing task.

29. (Original) A computer program product, tangibly stored on a computer-readable medium, for organizing components to perform a task used by a component based application, comprising instructions operable to cause a programmable processor to:

select a role name symbolizing the task that the component-based application requests, group components together to perform the task wherein each component includes an interface for communicating information with other components; and

define an assembly data-structure having the role name and metadata information identifying each component in the group of components and the connections used to connect the interface in each component with the other components used in performing the requested task.

30. (Original) A computer program product, tangibly stored on a computer-readable medium, for processing a task used by a component-based application, comprising instructions operable to cause a programmable processor to:

Applicant : Richard A. Dermer
Serial No. : 09/846,923
Filed : April 30, 2001
Page : 8 of 9

Attorney's Docket No.: 07844-444001 / P408

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receive a request from the component-based application that specifies a role name symbolizing the task;

access an assembly data-structure corresponding to the role name and having metadata information specifying a number of components used to perform the task and interfaces used to connect each component with other components, wherein the interface facilitates communicating information between components;

load a component identified in the assembly data-structure into an area for processing;

connect an interface associated with the loaded component to other components according to the meta-data information in the assembly data-structure; and

perform the requested task using the loaded component to process data and the interface to pass information from the loaded component to other components.

31. (Original) A computer program product, tangibly stored on a computer-readable medium, for integrating components together to perform an existing task when one of the components is modified, comprising instructions operable to cause a programmable processor to:

provide an assembly data-structure having metadata information specifying a number of components that work together to perform an existing task and a number of interfaces used to connect the components together and facilitate communication between the components;

modify one of the components, wherein the modified component alters the processing of information and renders the modified component and information incompatible with the other components associated with the existing task;

create a new component to filter information that passes through an interface connected to the modified component; and

modify the assembly data-structure to specify the new component and to indicate that the new component filter the information passing through the modified component, wherein the modified component and new component produce filtered information compatible with other components used by the existing task.